Honorable Michael J. Machado
Member of the Senate
State Capitol, Room 3086
Sacramento, California 95814

Dear Senator Machado:

This is in response to your letter of February 3, 2005, asking five questions concerning the Bureau of Reclamation's (Reclamation) renewal of the Central Valley Project (CVP) Water Contracts. We will address the questions in the order they are posed in your letter:

**Question 1: How is the state going to ensure that water quality problems have been addressed prior to expanding water deliveries?**

It is our understanding that the CVP contracts are being renewed for a 40-year period for settlement contracts and municipal and industrial users and for 25 years for agricultural users with no significant change in the contractual quantity of water supply. The ability of the CVP to meet the contractual amounts from the Delta is limited and, in recent years, the best that can be expected is 60-70 percent of full deliveries. DWR, as a member of CALFED, is moving forward on projects to improve the reliability and increase the amount of water delivered under project contracts for both the CVP and the State Water Projects (SWP). These efforts are conducted within the context of the CALFED Bay-Delta Program, which is designed to balance improvements in water supply reliability with improvements in water quality, the ecosystem, and levees.

Assurances that Reclamation will address water quality problems associated with meeting the CVP water supply contracts lie with the current operational requirements for the CVP and SWP and with conditions placed upon any increase in the SWP Delta export level.

Operation of the CVP is required to conform to all the terms and conditions contained in its water rights permits. The permits include conditions that implement flow objectives and water quality standards established to protect the beneficial uses of the Delta and its tributaries. These conditions are applicable irrespective of the amounts of water diverted. In addition, for exports for the CVP to be done at the SWP Delta facilities (referred to as Joint Point of Diversion), three plans must be approved by the State Water Resources Control Board (SWRCB): a plan to address water level impacts in the south Delta; a plan to address upstream impacts to fish; and a plan to address water quality impacts in the south and central Delta.

As you know, an objective of the South Delta Improvement Program (SDIP) is to increase the allowable SWP export level from 6680 cfs to 8500 cfs. Reclamation is the federal lead agency for this program and the CVP is expected to benefit from the export level increase. Per the Delta Improvement Package, adopted by the California Bay-Delta Authority, specific actions to improve water quality are to be done prior to implementing the higher export limit. In addition, Reclamation is directed under federal law (per HR 2828—Public Law 108-361) to develop and implement a similar plan for the CVP by October 2005 and prior to increasing exports from the Delta. Per recent State law (your SB 1155—Chap. 612, Statutes of 2004), DWR is to develop and implement a similar plan for the SWP by January 1, 2006. DWR is committed to fulfilling the State directives.

Efforts focusing on two geographical regions are underway to develop these plans. For the San Joaquin River at and downstream of Vernalis, DWR and Reclamation are participating in an informal stakeholder effort to develop a cooperative solution for resolving water quality problems. A draft recommendation is nearing completion. The next step will be to form a negotiating forum and complete an implementation agreement. This agreement will be essential for assuring the water quality problems on the lower San Joaquin River are sufficiently addressed. To meet the water quality requirements within the south Delta, west of the San Joaquin River, components of the preferred alternative of the South Delta Improvement Program must be implemented.

The SDIP is best known for the objective of increasing the allowable export level of the SWP to 8500 cfs. The two other objectives of the program are to provide adequate water quality and quantity to Delta agricultural diverters and to prevent juvenile salmon migrating down the San Joaquin River from straying into Old River. To meet these objectives, the SDIP preferred alternative includes permanent operable barriers in Old and Middle rivers, Grantline Canal and at the head of Old River.

Actions will be taken this year to improve water quality in the San Joaquin River. These actions are recirculation and operation of a dissolved oxygen facility. A draft Initial Study and Mitigated Negative Declaration for the demonstration project ("San Joaquin River Deep Water Ship Channel Demonstration Dissolved Oxygen Aeration Facility") was circulated earlier this year. The facility is targeted to be operational this fall to test its effectiveness at improving the low dissolved oxygen levels. A test of recirculation by Reclamation is similar to the one conducted in 2004 is also planned for 2005.

**Question 2: How would these new contracts (and their expanded deliveries) affect the ability of the California Bay-Delta Authority (Authority) to achieve the water quality and ecosystem restoration goals of the program, including complying with water quality standards and restoring fisheries and riparian habitat?**

As you are aware, Reclamation issues contracts to three classes of contractors. First Reclamation issues contracts to settlement contractors. These contractors are located on the tributaries to the Delta, and they claim rights that predate Reclamation's rights. Second, Reclamation issues water supply contracts to in-basin contractors. These contracts provide a supplemental water supply from Reclamation's reservoirs. Lastly, Reclamation issues export contracts for deliveries of Sacramento River water to water users located south of the Delta. None of the proposed long-term contracts are for greater amounts of water than those contracts have historically allowed. Thus, the reissuance of the contracts to either in-basin contractors or to export contractors will not affect the ability of the State and federal governments to achieve the goals articulated in the CALFED Record of Decision. Reclamation imposes delivery deficiencies under the contracts when there is insufficient water to meet all contract demands. Historically, the export contracts are subject to greater delivery deficiencies than are the in-basin contractors. To the extent that deliveries to the in-basin contractors increase under the contracts, inflow to the Delta could decrease. In some cases, current conditions are better than the conditions water quality standards require. Increased deliveries to in-basin contractors could impair water quality, but the resulting conditions would still comply with water quality objectives and should be adequate to protect the uses the standards are meant to address. In the past ten years, deliveries to export contractors have been about 60 percent of their contract amounts. New facilities and operational agreements are expected to increase the ability of the projects to deliver water to contractors, however, absent significant changes to the system full deliveries to those contractors are unlikely in the future.

**Question 3: What is the State's analysis of the potential environmental impacts of the Operations, Criteria, and Plan (OCAP) provisions that weakened salmon-related temperature and carry-over storage requirements?**

The revised Long-term CVP/SWP Operations Criteria and Plan (OCAP) describes future operations of the CVP and SWP that will differ from current operations and represent potential increased adverse impacts to salmon and steelhead in some Central Valley rivers. One factor that influences CVP and SWP operations is reduced water availability system-wide due to growing demand for and increased use of water by non-project water right holders. Another factor affecting operations is the decrease in trans-basin diversion of water from the Trinity River watershed to the Central Valley due to new requirements for higher flows in the Trinity River. A third factor is new arrangements for sharing water and pumping capacity agreed to by Reclamation and DWR as part of expanded integration of CVP and SWP operations.

The State is particularly concerned with the changes in operation that will impact winter-run Chinook salmon spawning and rearing in the upper Sacramento River downstream of Keswick Reservoir. Sacramento River winter-run Chinook salmon, a State and federally-listed endangered species, spawn and rear only in the upper river and are dependent on coldwater releases from Shasta Reservoir to maintain habitat. Predicted changes in operation under the new OCAP will result in a shorter reach of the upper Sacramento River having water temperature suitably low for spawning and rearing of winter run Chinook salmon in most years. Adverse effects on winter-run will be greatest during prolonged dry periods (multi-year drought) when water levels in project reservoirs are not replenished each winter and the supply of cold water that can be released to meet winter-run habitat requirements declines with each successive dry year. Modeling future operations with the OCAP indicates that in critically dry years about 45 percent mortality of winter-run Chinook eggs will occur due to elevated water temperature.

Requirements for temperature compliance in the upper Sacramento River for protection of winter-run Chinook are less stringent in the 2004 NOAA Biological Opinion on the OCAP than in the previous 1993 Biological Opinion. The 1993 Opinion required maintenance of a minimum 1.9 million acre-feet end of September storage level at Shasta Reservoir, intended to result in an adequate coldwater pool in the reservoir to maintain coldwater habitat in the following year. The current 2004 Opinion requires Reclamation to "target" a minimum carryover storage of 1.9 MAF. In addition, the 2004 Opinion does not require temperature compliance at specific locations in the upper Sacramento River. Selection of compliance locations will be determined each year through an adaptive management process, utilizing input from the interagency Sacramento River Temperature Task Force (SRTTF). State agencies (State Water Resources Control Board and the Department of Fish and Game) have participated in the SRTTF process since the late 1980s and are committed to continuing that participation to ensure that habitat needs for winter-run Chinook are considered in real-time decisions on water temperature management.

The overall effect of the operational changes will result in increased pressure on project operators to manage reservoirs more aggressively, with potential implications for fish habitat conditions immediately downstream from dams all the way to the Delta. Even with more intensive management, the State anticipates increased impacts to winter-run and spring-run Chinook will occur as a result of the changes in water project operation and less stringent temperature compliance requirements.

**Question 4: What impacts does the State believe could be caused to other more junior water users, if these contracts are signed and lead to increased water deliveries?**

Reclamation has water rights for the CVP issued in conformance with California law. Reclamation may utilize these rights to divert water up to the permitted amounts provided it complies with its permit conditions and applicable water quality standards. Because of the watershed protection statutes this question needs to be considered separately for increased export diversions and for increased in-basin diversions. Reclamation exports are the most junior water rights in the Central Valley; therefore, increased exports will not affect other legal users of water. In-basin diversions are based on the water right priority of Reclamation or its in-basin contractors. Since 1965, the SWRCB has included a water right term (Term 91) in new water rights for diversion of water tributary to the Delta to protect Reclamation in-basin rights. Increased in-basin deliveries by Reclamation will result in decreased water availability to permittees with Term 91 and these permittees will be required to cease diversions earlier than in the absence of the increased Reclamation deliveries. Our understanding is that this effect should be minor.

**Question 5: Has the State verified that the "water rights settlement" contracts are based on accurate determinations of underlying water rights?**

The State has not verified the underlying rights on which Reclamation's "settlement contracts" are based. The process to conduct such verification would be similar to undertaking an adjudication of the Sacramento Valley. This process is very lengthy, time consuming, and resource intensive. During the 1950s when these contracts were negotiated, there were extensive studies of these rights by Reclamation. The results of an in-depth water rights review at this time would not likely change the contract quantities. Most of the Sacramento settlement contracts contain provisions for both prior right water (base supply) and project water to supplement these rights. The price paid is in effect a melding of the ratio of the relatively inexpensive base supply that would have existed absent the CVP and the more expensive CVP project water.

Therefore, a change in the understanding of the quantity of the prior right water would simply increase the amount of project water needed under the contract. Since in-basin users have a priority to water use under the watershed protection act, such a change would affect the price paid under the contract but not likely the quantity under the contract.

Sincerely,

**Lester A. Snow**
**Director**
**Department of Water Resources**

**L. Ryan Broddrick**
**Director**
**Department of Fish and Game**

**Arthur G. Baggett, Jr.**
**Chair**
**State Water Resources Control Board**